JUST THE FACTS

DESIGNER DRUGS

AN EDUCATIONAL FACT SHEET FROM
THE FLORIDA ALCOHOL & DRUG ABUSE ASSOCIATION

WHAT ARE DESIGNER DRUGS?

Designer Drugs are synthetic variations (analogues) of illegal drugs. Designer drugs mimic the effects of classic narcotics, stimulants, or hallucinogens. Black-market chemists create illegal synthetic drugs by slightly altering the molecular structure of untested legal drugs. The term designer drug also refers to a new form of an existing drug when it first appears on the street.

The number of potential synthetic analogues that can be made and distributed is almost unlimited. Synthetic analogues currently available on the black market are divided into three types: analogues of phencyclidine (PCP), analogues of fentanyl and meperidine (both synthetic narcotic analgesics), and analogues of amphetamine and methamphetamine (which have hallucinogenic and stimulant properties).

PCP ANALOGUES - "DUST"

PCP is a white powder that dissolves in water. It is available in the form of tablets, powder, and often as a liquid for dipping cigarettes. PCP first appeared in the 1960s. It gained a reputation for "bad trips" that often caused users to become aggressive and violent. In the late 1970s, PCP resurfaced in a smokeable form and became popular because it offered a cheap high that sometimes lasted a full day.

In the past five years, a few "designer" PCP derivatives have surfaced: TCP, PCE, PCPY, PCC, and ketamine. In 1986, a new drug called "wack" was being sold in Dallas. "Wack" is smoked and contains PCP, formaldehyde, and roach repellent. On the East Coast, a mixture of "crack" and PCP called "spacebase" is popular. The combination of "crack" and PCP produces powerful mood changes and loss of contact with reality.

Using small amounts of PCP produces: agitation and excitement, lack of coordination, blank stare, catatonic rigidity, inability to speak, rapid involuntary vibration of the eyeball, flushing, and profuse perspiration. Moderate doses produce: coma or stupor, vomiting, hyper salivation, shivering, and fever. With high doses PCP users experience prolonged coma, hypertension and convulsions.

When treating a PCP user, keep him/her in isolation. Outside stimulation can cause paranoia, anxiety, and violent behavior. If a patient suffers respiratory depression, convulsions, and coma, it is necessary for him to be on a full life-support system in the intensive care unit of a hospital.

Because of its bad reputation, there appears to be a declining interest in newly designed forms of PCP. Those who illegally manufacture such drugs fear the risk of getting caught.

FENTANYL ANALOGUES

Marketed as "China white," "synthetic heroin," "Mexican brown" or "Persian white," this synthesized designer heroin can be several hundred to three thousand times stronger than morphine. It is contaminated with impurities, and is often disguised and sold as heroin, cocaine or speed. Fentanyl has caused countless deaths.

Fentanyl is a synthetic narcotic used in 70 percent of the surgery performed In the United States. Alphamethyl fentanyl is a simple derivative of fentanyl and is the identifying substance in designer heroin. Its chemical structure is different from heroin and morphine, but it has identical pharmacological and toxicological effects. It is sold in powder form and is often diluted with powdered sugar, baby laxative, or antihistamines.

The most common route of administration is intravenous injection; smoking and

snorting are increasing in popularity. The potential for addiction is extremely high because repeated use produces tolerance and physiological dependence.

Fentanyl acts primarily on the central nervous system and the gastrointestinal tract. Users often exhibit euphoria, drowsiness, respiratory depression, constipation, and muscle rigidity. Fentanyl decreases the heart rate up to 25 percent and causes a significant drop in blood pressure. The effects of fentanyl derivatives on the respiratory system are unknown, but it can be assumed the effects are more intense due to its higher potency.

Withdrawal symptoms the user experiences during detoxification from fentanyl include: runny nose, tearing, sneezing, irritability, insomnia, loss of appetite, abdominal cramps, pain in the bones, and muscles of the back, excessive sweating, nausea, tremor, increased heart rate, and blood pressure, and diarrhea, all leading to weight loss and dehydration. Safe, experimental, non-drug therapies for treating withdrawal symptoms have had positive results, and the user may find help and support at such organizations as Narcotics Anonymous. (M.M. Kirsch, 1986). There is evidence irreparable damage can be done to the receptors of the brain from a single injection of a designer heroin.

MEPERIDINE ANALOGUES

Meperidine (also known as Demerol) is a synthetic narcotic used to control severe pain. Two designer drugs similar in structure to meperidine are MPPP and PEPAP. These derivatives are more potent than meperidine. MPPP, with its contaminant MPTP, is usually sold as heroin. On the street, heroin has been given names such as "synthetic heroin," "new heroin" and "synthetic demerol." It is sold as an all-purpose analgesic painkiller. MPTP has caused irreversible brain damage in a syndrome similar to Parkinson's disease. Parkinson's disease destroys motor movement nerve cells and prevents the production of dopamine, a neurotransmitter. Symptoms of Parkinson's disease include: rigidity, palsy, stooped posture and difficulty speaking.

Meperidine analogues are usually sold as white powder and are administered intravenously. When contaminated meperidine is injected, users report a burning sensation in their veins. Some users snort the drug. Effects include: a metallic or medicinal taste in the mouth, jerking of limbs, tightness, stiffness, aching or freezing of muscles, lack of coordination, numbness of extremities, loss of facial hair, oily skin, blurred vision, difficulty speaking and swallowing, drooling, a spacey hallucinogenic high, and excessive sweating. Victims of MPTP poisoning suffer extreme symptoms.

Treating victims of MPTP is difficult. Users often do not exhibit symptoms of Parkinson's disease for several months or years or may not recognize the early stages of the disease. Doctors currently use L-dopa, a prescription drug, to temporarily treat Parkinson's disease.

AMPHETAMINE AND METHAMPHETAMINE ANALOGUES

Amphetamines encompass a large group of synthetic drugs. They are classified as central nervous system stimulants because of their euphoric effects. Methamphetamine was first synthesized in 1919 and has similar properties as amphetamines. Like other stimulants, methamphetamine produces euphoria, relieves fatigue, suppresses appetite, and reduces the need for sleep. Street names for methamphetamine include "crystal", "crank," and "speed." These drugs are popular became they are cheap and have a lasting effect. A designer crystal called "glass" appeared recently. It resembles small chunks of translucent glass. Some believe glass is a freebased (smokeable) form of crystal but black-marketers say it is just a new way of producing crystal.

When taken intravenously, the effects of crystal are felt instantaneously. The methamphetamine high lasts four to six hours. Users quickly build a tolerance to these drugs and must continually increase consumption to obtain the same effects. Addiction probability is high. Adverse reactions to these drugs depend on the users sensitivity and tolerance. Headaches, dizziness, confusion, agitation, nausea, and muscle aches and pains are common. As the user increases the dosage, bizarre behavior is manifested by paranoia, frequent mood changes, and constant picking and scratching of the skin. Psychosis is exhibited after prolonged chronic use of the drug.

A methamphetamine analogue popular among college students and young professionals is MDMA, also called ecstasy," "XTC," and "Adam." Its precursor MDA is an amphetamine-like drug that destroys the serotonin-producing neurons that play a direct role in regulating aggression, mood, sexual activity, and tolerance to pain. MDMA was first introduced as an appetite suppressant but was never manufactured because of its side effects.

In June 1985, the Drug Enforcement Agency (DEA) banned MDMA and gave it a Schedule I classification, the same as heroin, LSD and cocaine. Schedule I drugs are dangerous narcotics with no medical usefulness and a high potential for abuse.

In pure form MDMA is a white powder. It has a strong medicinal taste and is usually packaged in a clear,

gelatin capsule. It is rare to find MDMA in this very expensive form. MDMA is also sold as a yellowish or white pill. It is usually diluted with speed, caffeine, ephedrine or other amphetamines.

In small doses, MDMA acts as a mild intoxicant. It is nonhallucinogenic and has few physical liabilities. The user experiences enhanced alertness and mental clarity, positive feelings and attitudes toward others and himself, an increased ability to deal with problems and conflicts, feelings of warmth and love, and a greater ease in accepting positive and negative expressions.

Toxic effects become apparent in doses of 100 to 200 milligrams. Adverse effects include muscle tightness, involuntary clenching of the teeth, nausea and vomiting, dehydration, muscle aches and pains that persist for up to six weeks, restlessness, shaking in the jaw, swelling of the eyes, blurred vision, intermittent rapid eye movements, decreased sensitivity to physical pain, fluctuations in pulse, blood pressure and sugar levels, and occasional visual hallucinations. Long-term effects include psychological difficulties including confusion, depression, sleep problems, drug craving, severe anxiety, and paranoia, psychotic episodes.

Because it is chemically structured like MDA and methamphetamine, many speculate about the neurotoxicity of MDMA. MDA has been shown to destroy serotonin producing neurons in the brain and methamphetamine damages cells producing dopamine which can cause Parkinson's disease. Studies on rats injected with single and multiple doses of MDMA concluded that repeated doses cause a greater depletion of serotonin.

CONCLUSION

The number of synthetic analogues that can be made and distributed is almost unlimited. As long as there is demand for designer drugs, there will be a supply, in ever changing variations. The solution is preventing the demand for drugs.

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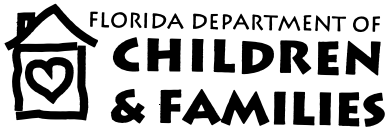

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